

07/02/98
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PTO/SB/05 (1/98)
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UTILITY PATENT APPLICATION TRANSMITTAL <small>(Only for new nonprovisional applications under 37 CFR 1.53(b))</small>	Attorney Docket No.	KE27-001
	First Inventor or Application Identifier	John P. Kennelly et al.
	Title	Cutting Table Fence
	Express Mail Label No.	EL054830403

APPLICATION ELEMENTS <small>See MPEP chapter 600 concerning utility patent application contents</small>	ADDRESS TO: Assistant Commissioner for Patents Box Patent Application Washington, DC 20231
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1. ☒ * Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original, and a duplicate for fee processing)
2. ☒ Specification [Total Pages 25]
(preferred arrangement set forth below)
- Descriptive title of the Invention plus title page
- Cross References to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to Microfiche Appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 7]
4. Oath or Declaration [Total Pages 3]
a. ☒ Newly executed (original or copy)
b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))
(for continuation/divisional with Box 17 completed)
[Note Box 5 below]
i. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference (useable if Box 4b is checked)
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered to be part of the disclosure of the accompanying application and is hereby incorporated by reference therein

6. ☐ Microfiche Computer Program (Appendix)
7. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
a. ☐ Computer Readable Copy
b. ☐ Paper Copy (identical to computer copy)
c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))
9. ☐ 37 C.F.R. § 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
10. ☐ English Translation Document (if applicable)
11. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☒ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
* Small Entity ☐ Statement filed in prior application Status still proper and desired (PTO/SB/09-12)
14. ☒ Certified Copy of Priority Document(s) (if foreign priority is claimed)
15. ☐ Other: \$395.00 check
16. ☒ Other: \$395.00 check

* A new statement is required to be entitled to pay small entity fees, except where one has been filed in a prior application and is being relied upon

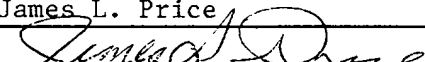
17. If a CONTINUING APPLICATION check appropriate box, and supply the requisite information below and in a preliminary amendment:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No. _____ / _____
Prior application information. Examiner _____ Group / Art Unit: _____

18. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label : _____ or ☒ Correspondence address below
(Insert Customer No. or Attach bar code label here)

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Signature		Date	7-2-98

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FEE TRANSMITTAL

Patent fees are subject to annual revision on October 1.

These are the fees effective October 1, 1997

Small Entity payments must be supported by a small entity statement, otherwise large entity fees must be paid. See Forms PTO/SB/09-12.

Complete if Known

Application Number

Filing Date

First Named Inventor

John P. Kennelly et al.

Examiner Name

Group / Art Unit

Attorney Docket No.

KE27-001

TOTAL AMOUNT OF PAYMENT (\$ 395.00)

METHOD OF PAYMENT (check one)

- 1.
- ☒
- The Commissioner is hereby authorized to charge indicated fees and credit any over payments to

Deposit Account Number
Deposit Account Name

23-0925

WELLS, ST. JOHN ET AL.

☒ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17☐ Charge the Issue Fee Set in 37 CFR 1.18 at the Mailing of the Notice of Allowance

- 2.
- ☒
- Payment Enclosed

☒ Check☐ Money Order☐ Other**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
101 790	201 395	Utility filing fee	395
106 330	206 165	Design filing fee	
107 540	207 270	Plant filing fee	
108 790	208 395	Reissue filing fee	
114 150	214 75	Provisional filing fee	

SUBTOTAL (1) (\$ 395.00)

2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
18	20** = 0	11	0
Independent Claims	2 - 3** = 0	41	0
Multiple Dependent			

**or number previously paid, if greater; For Reissues, see below

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
103 22	203 11	Claims in excess of 20
102 82	202 41	Independent claims in excess of 3
104 270	204 135	Multiple dependent claim, if not paid
109 82	209 41	** Reissue independent claims over original patent
110 22	210 11	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$ 0)

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
105 130	205 65	Surcharge - late filing fee or oath	
127 50	227 25	Surcharge - late provisional filing fee or cover sheet.	
139 130	139 130	Non-English specification	
147 2,520	147 2,520	For filing a request for reexamination	
112 920*	112 920*	Requesting publication of SIR prior to Examiner action	
113 1,840*	113 1,840*	Requesting publication of SiR after Examiner action	
115 110	215 55	Extension for reply within first month	
116 400	216 200	Extension for reply within second month	
117 950	217 475	Extension for reply within third month	
118 1,510	218 755	Extension for reply within fourth month	
128 2,060	228 1,030	Extension for reply within fifth month	
119 310	219 155	Notice of Appeal	
120 310	220 155	Filing a brief in support of an appeal	
121 270	221 135	Request for oral hearing	
138 1,510	138 1,510	Petition to institute a public use proceeding	
140 110	240 55	Petition to revive - unavoidable	
141 1,320	241 660	Petition to revive - unintentional	
142 1,320	242 660	Utility issue fee (or reissue)	
143 450	243 225	Design issue fee	
144 670	244 335	Plant issue fee	
122 130	122 130	Petitions to the Commissioner	
123 50	123 50	Petitions related to provisional applications	
126 240	126 240	Submission of Information Disclosure Stmt	
581 40	581 40	Recording each patent assignment per property (times number of properties)	
146 790	246 395	Filing a submission after final rejection (37 CFR 1.129(a))	
149 790	249 395	For each additional invention to be examined (37 CFR 1.129(b))	

Other fee (specify) _____

Other fee (specify) _____

* Reduced by Basic Filing Fee Paid

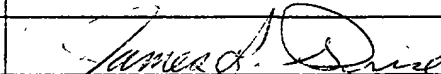
SUBTOTAL (3) (\$ 0)

SUBMITTED BY

Typed or Printed Name

James L. Price

Signature



Date

7/2/98

Complete (if applicable)

Reg. Number

27,376

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION FOR LETTERS PATENT

* * * * *

CUTTING TABLE FENCE

* * * * *

INVENTORS

**JOHN P. KENNELLY
JACK A. LINN**

ATTORNEY'S DOCKET NO. KE27-001

034830403

CUTTING TABLE FENCE

TECHNICAL FIELD

The present invention relates to cutting guides in general and more particularly to a removable fence for a cutting table.

BACKGROUND OF THE INVENTION

Numerous fence designs have been produced for the cutting tables of various cutting tools such as woodworking table saws. The fence on a table saw is used, in general, to hold an edge of a workpiece at a specific angle, usually parallel to a cutting blade 13. The fence must be held parallel to the blade to minimize the kerf width, and to avoid dangerous "kick-back." A precisely parallel fence also is a significant factor in cutting accuracy.

Much of recent development in design of fences for cutting tables has focused on accuracy, or the ability for the fence to maintain an accurate state of parallelism with the saw blade. However, a high degree of accuracy has not been maintained, at least not without involving complex and difficult to install mechanisms. Such mechanisms most often result in a practically permanent installation of the fence on the saw, since removal and remounting of the fence is most often a laborious, time consuming chore.

An example of a high quality, accurate retrofit fence for table saws is described in U.S. Patent 4, 521, 006 to Waters. This fence makes use of pulley mounted cables that extend in an endless loop

1 along opposite sides and across one end of the saw table. Two flights
2 of the cable run parallel to each of the front and back edges of the
3 table. Two of the four flights move in the same direction as the cable
4 is moved about the pulleys. Blocks are secured to these parts of the
5 cable. The blocks are releasably mounted to locking devices provided
6 at opposite ends of the fence cutting guide. Two clamping levers are
7 used to secure the fence to "L" shaped brackets that are bolted to the
8 table. In order to remove the fence from the table, the blocks must
9 be moved laterally toward the table, away from engagement with the
10 locking levers. This requires the user to reach under the fence, shift
11 one block from engagement with the associated locking lever, then walk
12 around the saw and perform the same steps to remove the remaining
13 block from the lever on that side of the table. Now the fence may
14 be removed, but only by sliding it off an end of the table.
15 Remounting the fence involves the above operation in reverse.

16 U.S. Patent 2, 805,479 to Droste discloses a work table for sheet
17 materials in which opposite ends of a fence-like bar is mounted to
18 cables that extend about pairs of pulleys. The pulleys are rotatably
19 mounted at ends of the table. Two of the pulleys are interconnected
20 by a drive shaft for rotation in unison. Thus rotation of the shaft will
21 cause corresponding substantially equal motion of the cables about the
22 pulleys. The fence spans the table, with ends clamped to the cables
23 by screw and nut combinations. The fence may be removed by
24 loosening the clamps.

1 The above examples of cable and pulley mounted fences operate
2 well to hold a fence in accurate position on across a table surface, but
3 both are relatively complex. Also neither of the above apparatus are
4 easily removable from the cutting table when use requires removal of
5 the fence.

6 It is therefor an object of the present invention to provide a
7 cutting table fence that is simple in construction, easy to mount to an
8 existing cutting table, and which includes a cutting guide that is easily
9 removable from the table.

10 The above and still further objects and advantages will become
11 apparent from the following description which, taken with the
12 accompanying drawings, disclose a preferred form of the present
13 invention.

14 BRIEF DESCRIPTION OF THE DRAWINGS

15 Preferred embodiments of the invention are described below with
16 reference to the following accompanying drawings.

17 Fig. 1 is a perspective view of an operator and table saw with
18 a preferred form of the present fence in operation thereon;

19 Fig. 2 is a top plan view of the preferred fence on a table saw;

20 Fig. 3 is an end elevation view of the preferred fence on a table
21 saw;

22 Fig. 4 is a side elevation view as viewed from the left in Fig. 3;

23 Fig. 5 is an enlarged fragmented sectional view taken substantially
24 along line 5-5 in Fig. 3;

1 Fig. 6 is a view similar to Fig. 5 only showing the cutting guide
2 lifted clear of remaining mechanism and table saw;

3 Fig. 7 is an enlarged fragmented sectional view taken substantially
4 along line 7-7 in Fig. 3;

5 Fig. 8 is an enlarged fragmented detail plan view of a lug
6 adjuster and associated components of the preferred fence; and

7 Fig. 9 is a fragmented detail view showing an aligning lug
8 received between chain rollers.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

This disclosure of the invention is submitted in furtherance of the constitutional purposes of the U.S. Patent Laws "to promote the progress of science and useful arts" (Article 1, Section 8).

In general reference to Fig. 1 of the drawings, a cutting table is shown as identified by the reference numeral 10. The particular cutting table 10 exemplified is a table saw of the type commonly used in the woodworking industry. Other types of cutting tables may also be used with the present fence, which is generally shown at 12.

The exemplary table 10 includes a table top with a substantially planar top surface 14 and substantially parallel forward and rearward side edges 16, 18. The size and configuration of the table top may vary according to the nature of the cutting device, but typically is rectangular and the edges 16, 18 are usually substantially parallel. The edges 16, 18 are joined by side edges 20, 22 that are also substantially parallel and perpendicular to the forward and rearward edges 16, 18 (Fig. 2).

Preferred forms of the present fence 12 are adapted to be mounted to existing cutting table tops, and may be produced as a retrofit for a variety of table forms and sizes. However, it is also possible for the present fence to be produced in combination with a cutting table.

In general terms, the preferred fence 12 includes an elongated cutting guide 24, and motion conditioning members 26 configured for

attachment to the cutting table 10. The motion conditioning members 26 are releasably connected by forward (Fig. 5) and rearward (Fig. 8) aligning lugs 28, 29 to the cutting guide 24 to permit substantially linear motion of the elongated cutting guide 24 while holding the cutting guide at a prescribed angular relation. The aligning lugs 28, 29 are configured to permit the elongated cutting guide 24 to be lifted upwardly from engagement with the motion conditioning members 26.

In preferred forms, the motion conditioning members 26 are configured for attachment to forward and rearward guide rails 32, 33 that are mountable by bracket assemblies 30 (Figs. 1, 2) to the cutting table 10. The bracket assemblies 30 mount the guide rails 32, 33 to the table in such a manner that the guide rails 32, 33 are substantially parallel to one another and to the respective forward and rearward cutting table edges 16, 18.

The brackets 30 are preferably "L" shaped and may be provided with mounting slots and spacers that will enable secure mounting by means of standard bolt or bolt and nut combinations to various cutting tables. In the example illustrated, the brackets 30 are secured to the table side edges 20, 22. It is also possible that other bracket configurations and other mounting positions could be used to secure the guide rails 32, 33 in position in relation to the cutting table 10.

In a preferred form, the guide rails 32, 33 are comprised of elongated channel members, preferably formed of a rigid material such

as steel or aluminum. The guide rails preferably extend at least the full length of the forward and rearward table edges 16, 18. The rails 32, 33 include respective forward and rearward elongated top guide surface 34, 36 that are positioned by the bracket assemblies 30 in parallel relation to and slightly below the top surface 14 of the cutting table 10.

A preferred example of the motion conditioning members 26 is shown as endless chains 37, 38 on respective guide rails 32, 33. The chains are trained about pairs of sprockets 40, 42 that are rotatably mounted at ends of the respective guide rails 32, 33. The chains 37, 38 include a working flights that extend along and are slidably supported on the guide rail surfaces 34, 36 (Fig. 9).

Chains 37, 38 are advantageously identical conventional roller-type chain with sprocket tooth receiving spaces between successive rollers. Such spaces are equally spaced apart in order to mate in driving connection with the teeth of the sprocket. The spaces are also used by the aligning lugs 28, 29 to releasably position the cutting guide 24 as will be understood from further description below.

A shaft 44 (Figs. 1, 2, 4 and 7) interconnects a stub shaft 42 that mounts one of the sprockets on one guide rail with another stub shaft 43 that mounts another one of the sprockets on the remaining guide rail. Sleeves 45 interconnect the stub shafts 42, 43 axially with the shaft 44. Set screws 46 (Figs. 2, 7) operably lock the stub shafts 42, 43 to the shaft 44 so rotation of the shaft assembly will

1 result in rotation of all the sprockets in unison, and corresponding
2 identical movement of the chains 37, 38.

3 In preferred forms, the shaft assembly is extendible and adjustable
4 to accommodate tables of different widths. To this end, the sleeves 45
5 are adjustably affixed to the shaft sections by set screws 46 to allow
6 axial adjustment of the shaft assembly and rotational alignment of the
7 sprockets. A cutting guide adjustment knob 48 is secured to the
8 rearward end of one stub shaft 43, enabling a user to rotate the shaft
9 and thereby move the chains and attached cutting guide 24 across the
10 cutting table 10.

11 Chain tension may be selectively adjusted by chain tensioners 47
12 (Figs. 2 and 3) which mount the two sprockets at ends of the guide
13 rails that are opposite to the shaft attached sprockets. The
14 tensioners 47 are preferably of a yoke and screw variety mounted within
15 the guide rails, though other tensioner configurations could also be used.

16 The illustrated cutting guide 24 is preferably formed of an
17 extruded aluminum channel, but could be any other appropriate material
18 or construction suitable for use as a straight cutting guide. The guide
19 is preferably longer than the width of the table (between forward and
20 rearward edges 16, 18), and is mounted to forward and rearward base
21 blocks 50, 51.

22 In preferred forms, the forward and rearward base blocks 50, 51
23 are mounted at opposed ends of the cutting guide 24. The blocks may
24 be formed of billet machined aluminum, cast, or otherwise formed and

1 attached adjacent opposite ends of the cutting guide by bolts or other
2 appropriate fastening technology.

3 Base blocks 50, 51 preferably include chain receiving groove 52,
4 53 respectively that fit over working flights of the chains 37, 38. The
5 grooves 52, 53 are substantially parallel and oriented normal to the
6 cutting guide to be received over the working flights of the chains.
7 Bottom surfaces of the base blocks may slidably rest against top
8 surfaces of the guide rails.

9 The aligning lugs 28, 29 are preferably secured to the respective
10 base blocks 50, 51 within the chain receiving grooves 52, 53 and extend
11 downwardly to be releasably received in the spaces between chain rollers
12 (see Figs. 5 and 9). In preferred forms, both aligning lugs 28, 29 are
13 shaped as cylindrical pins, preferably of steel with pointed ends to
14 facilitate insertion of the aligning lugs between chain rollers. The
15 diameters of the aligning lugs are substantially equal to the spacing
16 between adjacent chain rollers. Thus when the aligning lugs 28, 29
17 lowered into the spaces along the chains, the associated base blocks and
18 cutting guide are releasably secured to the chain for movement across
19 the cutting table. Further, the cutting guide, base blocks and aligning
20 lugs can be easily lifted upwardly from engagement with the chains.

21 One of the aligning lugs, preferably the forward lug 28 is may be
22 mounted by a lug adjustor 54 (Figs. 2, 8) that is operatively connected
23 between the cutting guide and the one lug. The lug adjustor 54 is
24 configured to adjustably position the one lug laterally with respect to

1 the cutting guide 24. Such lateral adjustment results in angular
2 positioning of the cutting guide 24 when the lug is positioned in
3 engagement with the associated chain 37.

4 In the illustrated example, and with specific reference to Fig. 8,
5 the lug adjustor 54 is mounted to the forward base block 50. The
6 exemplary adjustor 54 is comprised of a slide 55 movably mounted
7 within a complimentary way formed in the base block 50. An anchor
8 screw 56 is received through a slot 57 in the slide 55 and threadably
9 engages the base block 50. The anchor screw 56 may be loosened to
10 allow the slide 55 to move translationally within the way through a
11 distance limited by the length of the slot 57.

12 The forward aligning lug 28 is rigidly attached to the slide 55 and
13 projects downwardly into the chain receiving groove 52 of the base
14 block 50. Any sliding movement of the slide 55 will thus result in
15 corresponding movement of the aligning lug 28.

16 Fine angular alignment of the cutting guide is accomplished by
17 turning a headed adjustment screw 60. The adjustment screw 60
18 extends through a portion of the base block 50 which is sandwiched
19 between the screw head and an appropriate spring clip 58. The
20 adjustment screw 60 is thus held by the screw head and spring clip 58
21 against axial movement. Threads on the adjustment screw 60 engage
22 mating threads within the slide 55. Rotation of the adjustment screw
23 will thus result in sliding movement of the slide 55 and the attached
24

forward aligning lug 28. Such motion results in corresponding angular adjustment of the cutting guide 24.

A remaining one of the aligning lugs, preferably rearward aligning lug 29 is rigidly secured to one of the base blocks, preferably the rearward base block 51 (Fig. 9). Aligning lug 29 is fixed in position on the associated base block 51 and extends downwardly within the chain receiving groove where it may be releasably received within the adjacent spaces along the chain 38. Thus the aligning lug 29 is stationary relative to the cutting guide, and will act as a pivot point about which the cutting guide may be angularly adjusted in response to turning of the adjusting screw 60.

In preferred forms of the present fence 12, a locking mechanism 65 is provided in operable connection to the cutting guide 24. The locking mechanism 65 in general is configured to secure the cutting guide in a selected position along the table 10.

The preferred locking mechanism exemplified herein includes a clamp bar 66 (Figs. 5, 6) mounted to one of the base blocks (preferably the rearward base block 51) by a tightener 67 that is configured to clamp the remaining base block (preferably the forward base block 50) to an adjacent side edge of the table 10.

More specifically, the clamp bar 66 is mounted at an end of a jack screw 70. The jack screw end is journaled in the clamp bar 66 and the clamp bar slides in a guideway 68 formed in the base block 51 in such a manner that rotation of the jack screw 70 will not result in

1 corresponding rotational motion of the clamp bar. However, the threads
2 of the jack screw engage mating threads formed in the rearward base
3 block 51, so that rotation of the jack screw 70 will result in forward
4 or rearward motion of the clamp bar.

5 A knob 71 is provided to enable manual rotation of the jack
6 screw. The knob 71 may thus be turned to move the clamp bar 66
7 against the rearward guide rail 33. This action pulls the forward base
8 block 50 (Fig. 4) against the forward edge 16 of the table 10, thereby
9 securely clamping the cutting guide in position relative to the table.

10 The above clamping action will cause the chains, especially the
11 forward chain 37 to shift slightly toward the forward edge 16 of the
12 table. This shifting motion is accommodated by allowing a limited
13 amount of axial "play" of the sprockets within the guide rails 32, 33 so
14 the chains need not bend during the clamping action.

15 It is pointed out that the locking mechanism described above may
16 take other forms. For example, known forms of cam type locking
17 mechanisms (not shown) may be provided in place of the jack screw
18 and knob arrangement described above.

19 Given the above technical description, installation and operation
20 of the presently preferred fence 12 may be readily understood.

21 The present fence 12 may be supplied in four basic components:
22 the cutting guide 24 (with the base blocks 50, 51 and associated
23 elements mounted thereon); the forward guide rail 32 (with brackets 30,
24 forward chain 37 and sprockets 40 mounted thereon); the rearward

1 guide rail 33 (with the remaining brackets 30, rearward chain 38 and
2 sprockets 41 mounted thereon); and the shaft 44 (with the sleeves 45
3 mounted thereon).

4 Given the above components, the fence 12 may be mounted to
5 a table 10 by simply bolting the brackets 30 to the appropriate table
6 sides. Many conventional table saws include mounting holes in the
7 table sides that can be used in this procedure. If such holes are not
8 provided, an ordinary drill may be used to form mounting holes.

9 Appropriate slots (Fig. 1) in the mounting brackets 30 will allow
10 elevational positioning of the guide rails 32, 33. This may be done
11 with the cutting guide 24 resting on the table top surface 14 and with
12 the base blocks 50, 51 overhanging the front and rearward table
13 edges 16, 18. The rails 32, 33 are adjusted elevationally (with the
14 brackets 30 loosely mounted) until the bottom surfaces of the base
15 blocks 50, 51 just touch the respective top guide surfaces 34, 36 and
16 the aligning lugs 28, 29 are received within adjacent spaces between
17 rollers of the chains 37, 38. When proper elevational adjustment is
18 achieved, the bolts securing the brackets 30 to the table are tightened.

19 Now the shaft 44 may be mounted. This is done by sliding the
20 sleeves 45 inwardly from the shaft ends to allow positioning of the shaft
21 in axial alignment with the stub shafts 42, 43. The sleeves 45 are then
22 slid outwardly to overlap and receive ends of the respective stub shafts.
23 All but one of the set screws 46 are then tightened. The one
24

1 remaining set screw 46 is left loose to facilitate alignment of the cutting
2 guide.

3 Cutting guide alignment may be achieved by first lowering the
4 cutting guide onto the table. As this is done, the aligning lugs 28, 29
5 will slip downwardly into position within spaces between rollers of the
6 chains 37, 38. Now the cutting guide 24 is pushed across the table
7 until it touches and shifts into flush abutment with the cutting blade 13.
8 The cutting guide 24 is now parallel with the cutting blade 13 and the
9 final set screw 46 may be tightened, thereby locking all the sprockets
10 and chains in precise relation. Rotation of the cutting guide adjusting
11 knob 48 will now result in corresponding rotation of all sprockets, and
12 uniform, in unison movement of the chains 37, 38. The chains 37, 38
13 move the cutting guide 24 across the table 10, all the while maintaining
14 the cutting guide 24 in the set, precise parallel relation to the cutting
15 blade 13.

16 If further precision positioning of the cutting guide is desired, the
17 adjustment screw 60 may be used to shift the forward end of the
18 cutting guide 24 to the desired angular position. Such fine adjustment
19 is best accomplished using appropriate fine measuring tools such as a
20 conventional dial indicator for further precision adjustment of the cutting
21 guide. The present fence 12 is now ready for use.

22 In describing use, it will be assumed that a 3 inch cut is to be
23 made on a workpiece 80 as shown in Fig. 1. To set the fence, the
24 user simply turns the adjusting knob 48 driving the chains to move the

1 cutting guide to a point 3 inches away from the cutting blade 13. Any
2 appropriate measuring device may be used to assure proper positioning.
3 Alternatively, a scale (not shown) of conventional nature may be
4 mounted to the rearward guide rail 33 for this purpose.

5 Once the proper cutting guide position is selected, the locking
6 jack screw knob 71 may be tightened to lock the cutting guide in
7 position. As the knob 71 is turned, the clamp bar 66 will move
8 against the rearward guide rail 33 and pull the forward base block 50
9 firmly against the forward edge 16 of the cutting table, thus locking the
10 cutting guide in position, with the chains holding the guide in the set
11 alignment. The cut may now be made.

12 If use of the cutting table is desired without the fence 12, the
13 cutting guide 24 may simply be lifted from the table. The aligning
14 lugs 28, 29 will slip upwardly from engagement with the chains 37, 38
15 as the cutting guide is lifted. Now the table 10 is free and
16 unobstructed.

17 When it is again desired to re-mount the cutting guide to the
18 table, the user simply lowers the guide onto the table. The aligning
19 lugs 28, 29 will slide into whatever chain spaces are immediately below,
20 and the precise previously set angular adjustment is again established.
21 This relationship will be maintained regardless of where the cutting
22 guide is positioned on the table, and use can begin immediately as
23 described above.
24

1 In compliance with the statute, the invention has been described
2 in language more or less specific as to structural and methodical
3 features. It is to be understood, however, that the invention is not
4 limited to the specific features shown and described, since the means
5 herein disclosed comprise preferred forms of putting the invention into
6 effect. The invention is, therefore, claimed in any of its forms or
7 modifications within the proper scope of the appended claims
8 appropriately interpreted in accordance with the doctrine of equivalents.
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CLAIMS:

1. A fence for a cutting table, comprising:

an elongated cutting guide;

motion conditioning members configured for attachment to the cutting table and releasably connected by aligning lugs to the cutting guide to permit substantially linear motion of the elongated cutting guide while holding the elongated cutting guide at a prescribed angular relation; and

wherein the aligning lugs are configured to permit the elongated cutting guide to be lifted upwardly from engagement with the motion conditioning members.

2. A fence for a cutting table as defined by claim 1, further comprising:

a locking mechanism operatively connected to the cutting guide and configured to secure the cutting guide in a selected position along the motion conditioning members.

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1 3. A fence for a cutting table, comprising:
2 a pair of elongated guide rails with brackets configured to be
3 mounted to the cutting table;
4 an endless chain on each guide rail, trained about sprockets
5 rotatably mounted on the guide rail;
6 each chain including sprocket tooth receiving spaces and a working
7 flight extending along the associated guide rail;
8 a shaft interconnecting one of the sprockets on one guide rail
9 with another one of the sprockets on the remaining guide rail;
10 an elongated cutting guide;
11 aligning lugs operably mounted to the cutting guide and releasably
12 received within selected tooth receiving spaces of the chains in such a
13 manner that the cutting guide may be selectively engaged with the
14 chains and lifted from the chains; and
15 a locking mechanism configured to secure the cutting guide in a
16 selected position along the working flights of the chains.

17
18 4. A fence for a cutting table as defined by claim 3, further
19 comprising:
20 a lug adjustor operatively connected between the cutting guide and
21 one of the aligning lugs, configured to adjustably position the one
22 aligning lug laterally with respect to the cutting guide.
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1 5. A fence for a cutting table as defined by claim 3, wherein
2 the shaft is comprised of:

3 an extendible drive shaft secured to the one sprocket and said
4 another one of the sprockets.

5
6 6. A fence for a cutting table as defined by claim 3, wherein
7 the chains are roller chains.

8
9 7. A fence for a cutting table as defined by claim 3, further
10 comprising base blocks mounted at opposed ends of the cutting guide;
11 and

12 wherein the aligning lugs are mounted to the base blocks.

13
14 8. A fence for a cutting table as defined by claim 3, further
15 comprising base blocks mounted at opposed ends of the cutting guide;

16 wherein each base block includes a chain receiving groove formed
17 therein

18 wherein the aligning lugs are mounted to the base blocks within
19 the chain receiving grooves.

1 9. A fence for a cutting table as defined by claim 3, further
2 comprising:

3 base blocks mounted at opposed ends of the cutting guide;
4 each base block including a chain receiving groove formed therein;
5 wherein the aligning lugs are situated within the chain receiving
6 grooves;

7 a lug adjustor on one of the base blocks, mounting one of the
8 aligning lugs and configured to adjust the one aligning lug laterally with
9 respect to the cutting guide.

10
11 10. A fence for a cutting table as defined by claim 3, further
12 comprising base blocks mounted at opposed ends of the cutting guide;
13 and

14 a lug adjustor or on one of the base blocks, mounting one of the
15 aligning lugs and configured to selectively shift the one aligning lug
16 laterally with respect to the cutting guide.

11. A fence and cutting table, comprising:

a table top with a substantially planar top surface and substantially parallel forward and rearward side edges;

a pair of elongated guide rails, each including an elongated guide surface;

brackets mounting the pair of guide rails to the table top in substantial parallel relation to the forward and rearward edges and with the guide surfaces substantially parallel to the top surface;

an endless chain on each guide rail, trained about sprockets rotatably mounted on the guide rail;

each chain including a working flight extending along the associated guide rail guide surface;

each chain further including sprocket tooth receiving spaces;

a shaft interconnecting one of the sprockets on one guide rail with another one of the sprockets on the remaining guide rail for common rotation;

an elongated cutting guide spanning the top surface of the table top;

aligning lugs operably mounted to the cutting guide and releasably received within selected tooth receiving spaces of the chains and configured in such a manner that the cutting guide and aligning lugs may be selectively engaged with the chains and lifted from the chains;
and

1 a locking mechanism configured to secure the cutting guide in a
2 selected position along the working flights of the chains.

3
4 12. A fence and cutting table as defined by claim 11, further
5 comprising:

6 a lug adjustor operatively connected between the cutting guide and
7 one of the aligning lugs, configured to selectively position the one
8 aligning lug laterally with respect to the cutting guide.

9
10 13. A fence and cutting table as defined by claim 11, wherein
11 the shaft is comprised of:

12 an extendible drive shaft secured to the one sprocket and said
13 another one of the sprockets.

14
15 14. A fence and cutting table as defined by claim 11, wherein
16 the chains are roller chains.

17
18 15. A fence and cutting table as defined by claim 11, further
19 comprising base blocks mounted at opposed ends of the cutting guide;
20 and

21 wherein the aligning lugs are mounted to the base blocks.
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16. A fence and cutting table as defined by claim 11, further comprising;

base blocks mounted at opposed ends of the cutting guide;
wherein each base block includes a chain receiving groove formed therein; and

wherein the aligning lugs are mounted to the base blocks within the chain receiving grooves.

17. A fence and cutting table as defined by claim 11, further comprising base blocks mounted at opposed ends of the cutting guide; and

wherein the aligning lugs include a first aligning lug on one of the base blocks, configured to secure the cutting guide to one of the chains and a second aligning lug on a remaining one of the base blocks; and

a lug adjustor operatively connected between the cutting guide and the second aligning lug, configured to selectively position the second aligning lug laterally with respect to the cutting guide.

18. A fence and cutting table as defined by claim 11, further comprising a pair of base blocks, each mounted at an end of the cutting guide; and

wherein the locking mechanism includes a clamp bar mounted to one of the base blocks by a tightener configured to clamp the remaining base block to the cutting table top.

1 ABSTRACT OF THE DISCLOSURE

2 A fence is described for attachment to a cutting table or in
3 combination with a cutting table. The fence includes pair of elongated
4 guide rails with brackets configured to be mounted to the cutting table.
5 An endless chain is provided on each guide rail, trained about sprockets
6 rotatably mounted on the guide rail. Each chain includes a working
7 flight that extends along the associated guide rail. Each chain further
8 includes sprocket tooth receiving spaces. A shaft interconnects one of
9 the sprockets on one guide rail with another one of the sprockets on
10 the remaining guide rail such that rotation of the shaft will result in
11 all the rotating in unison, causing uniform and equal movement of the
12 chain. An elongated cutting guide is provided with aligning lugs that
13 are releasably received within selected tooth receiving spaces of the
14 chains in such a manner that the cutting guide may be selectively
15 engaged with the chains and lifted from the chains. A locking
16 mechanism is configured to secure the cutting guide in a selected
17 position along the working flights of the chains.

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* * * * *

Full name of inventor: **Jack A. Linn**

Inventor's Signature: Jack A. Linn

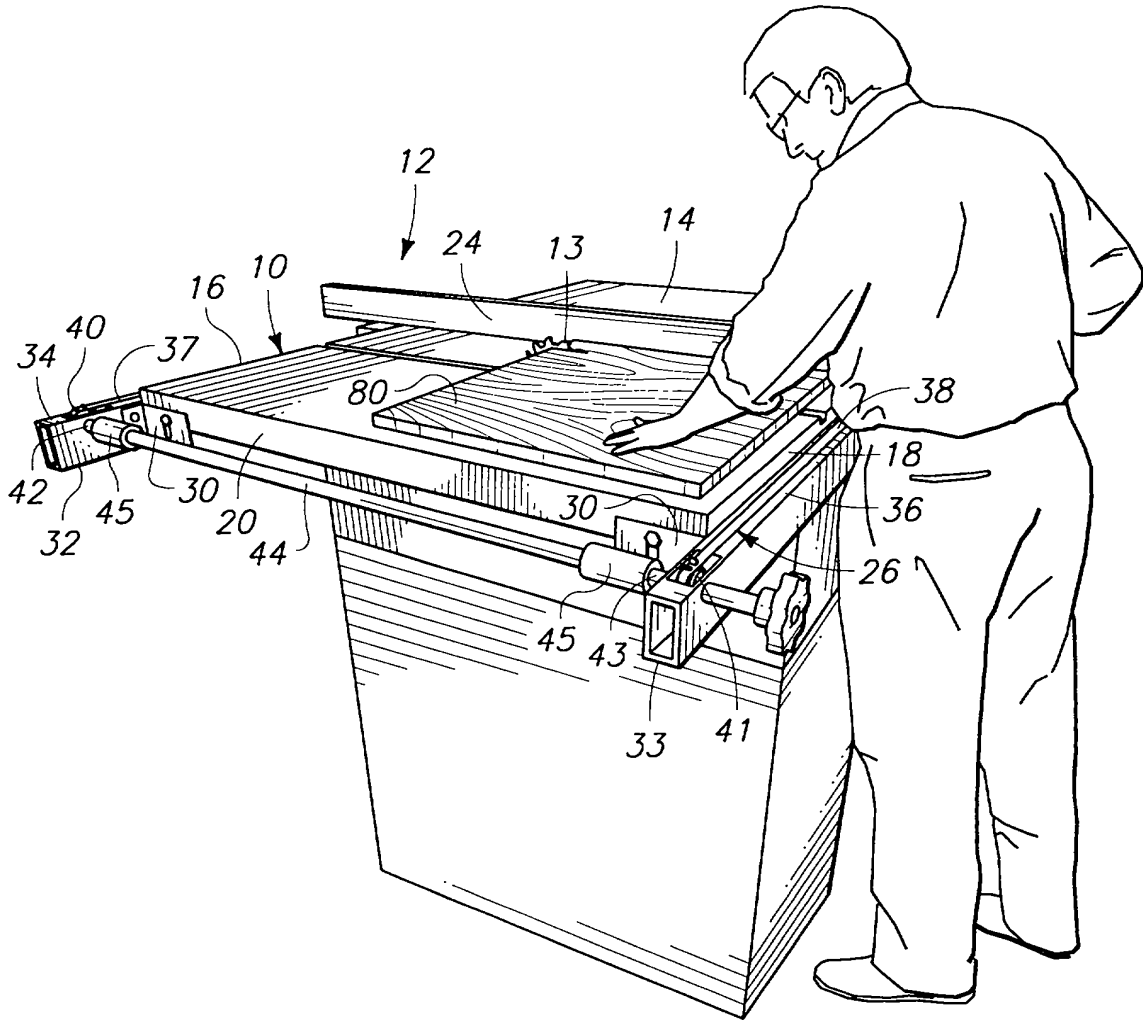
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Residence: **Lake Almanor, California**

Citizenship: **U.S.**

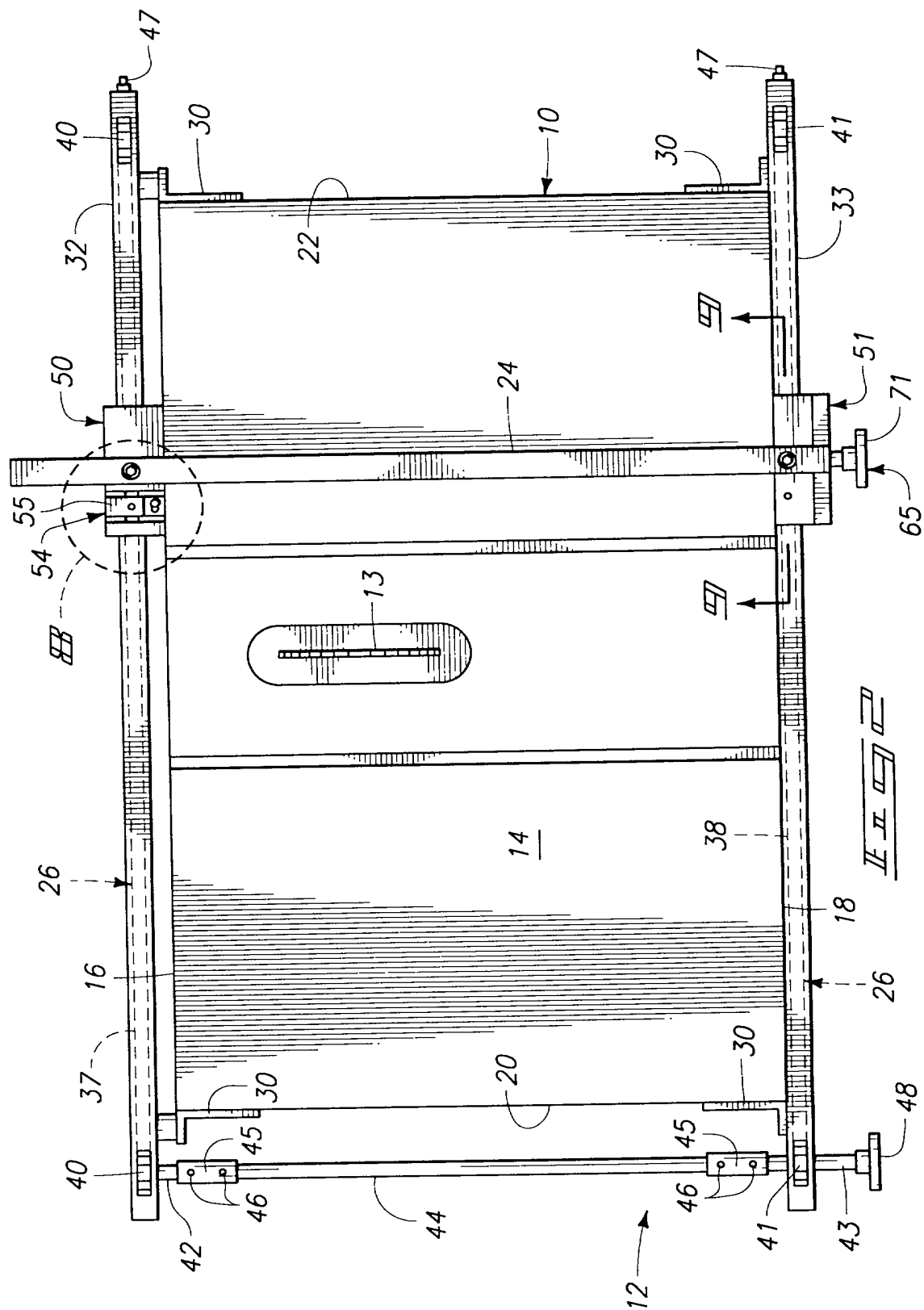
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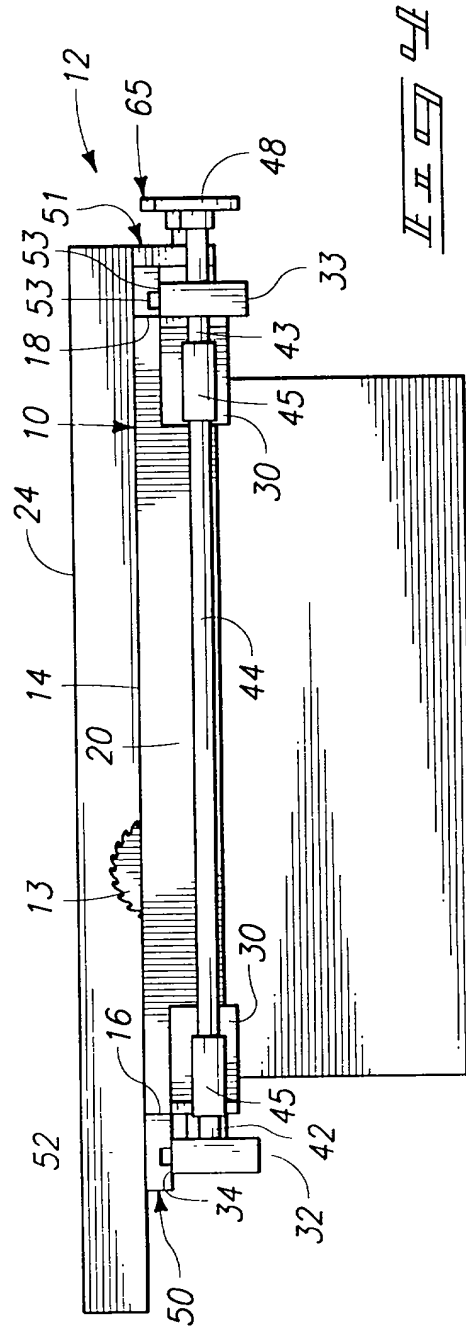
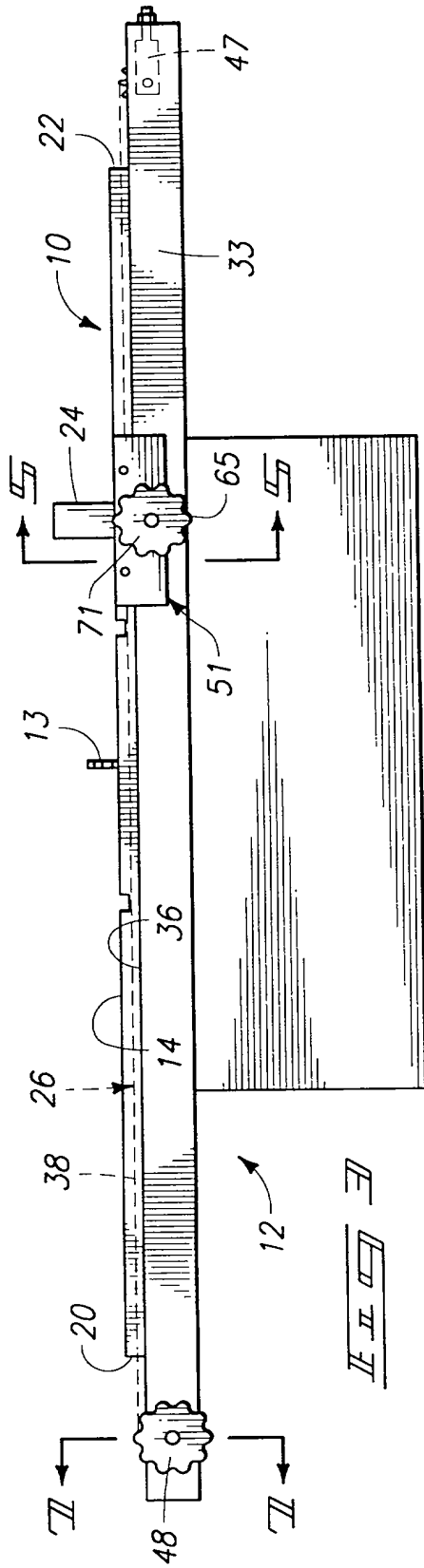
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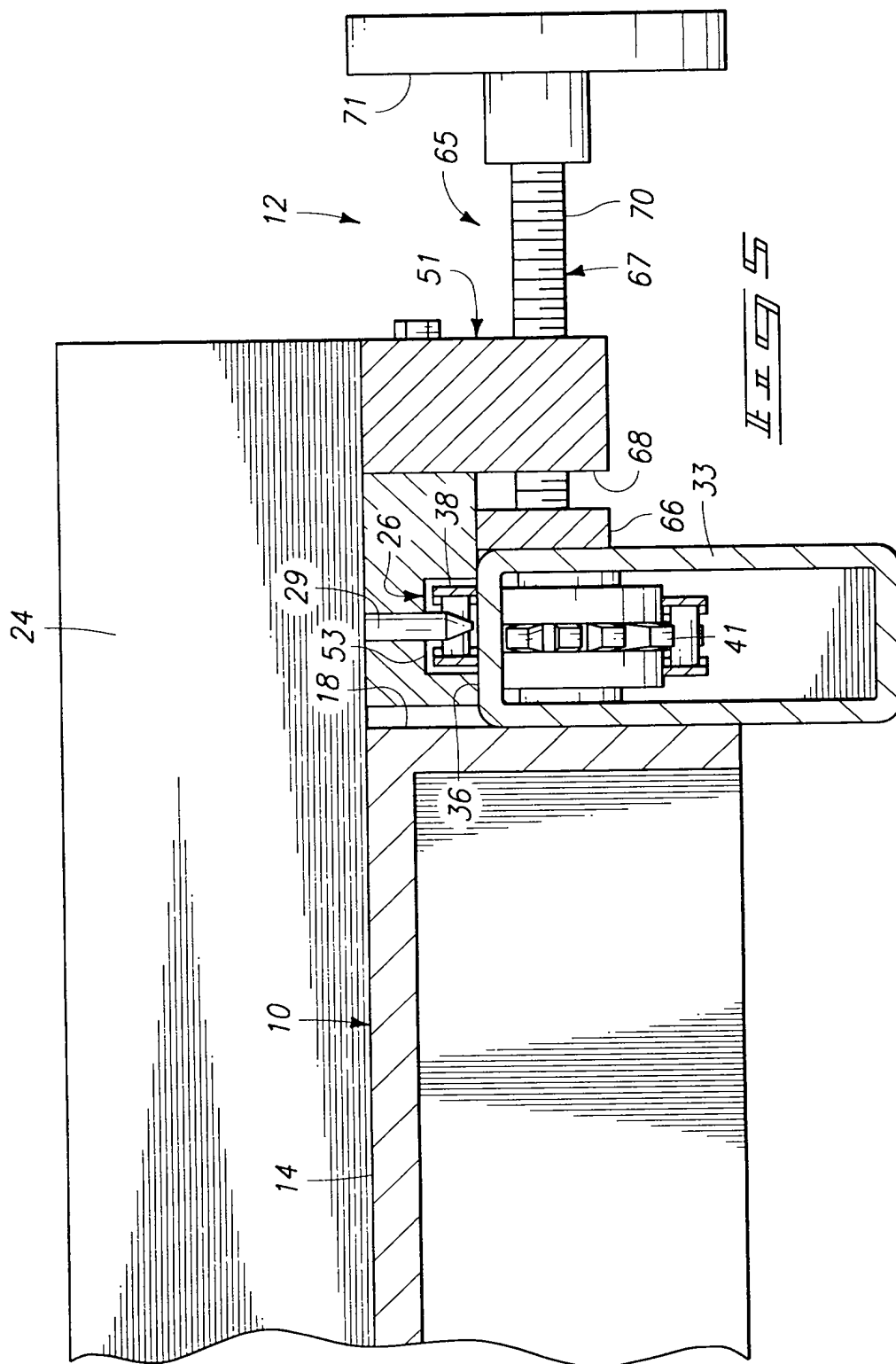
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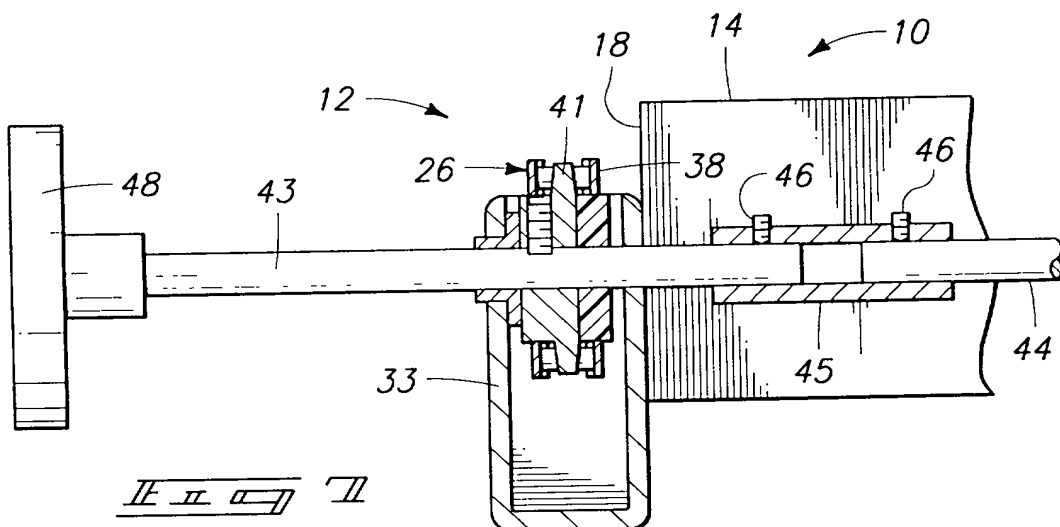
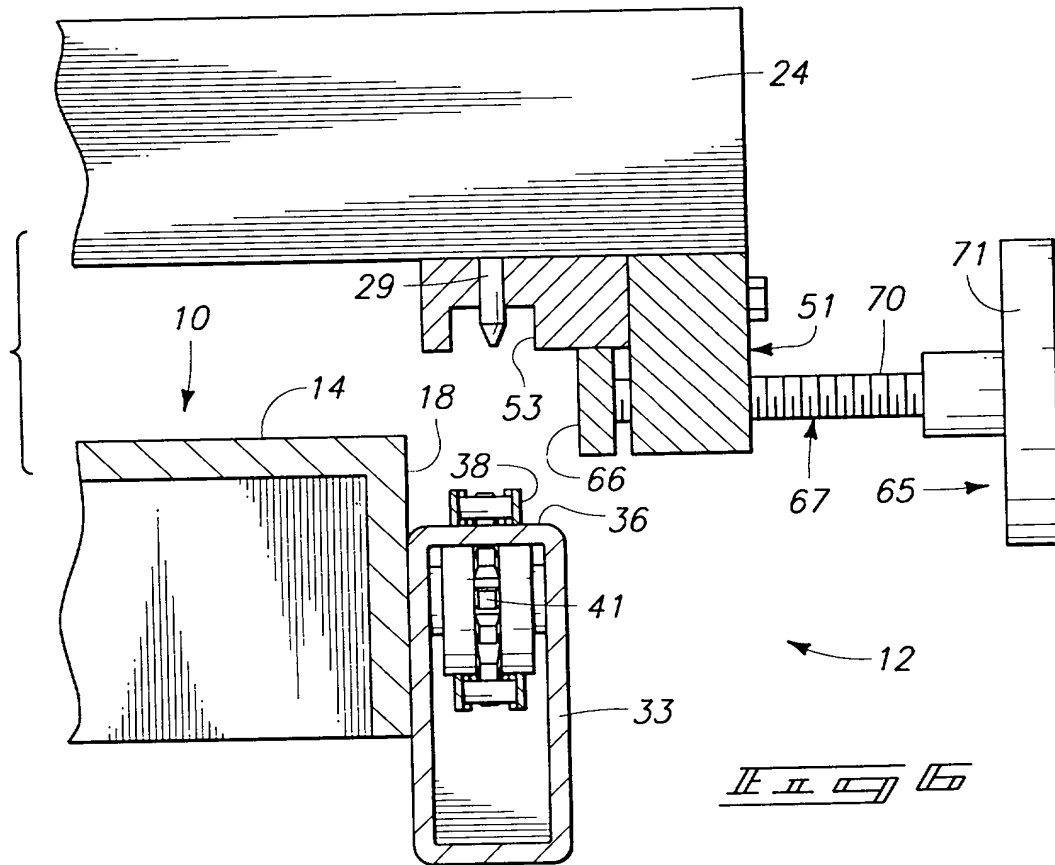
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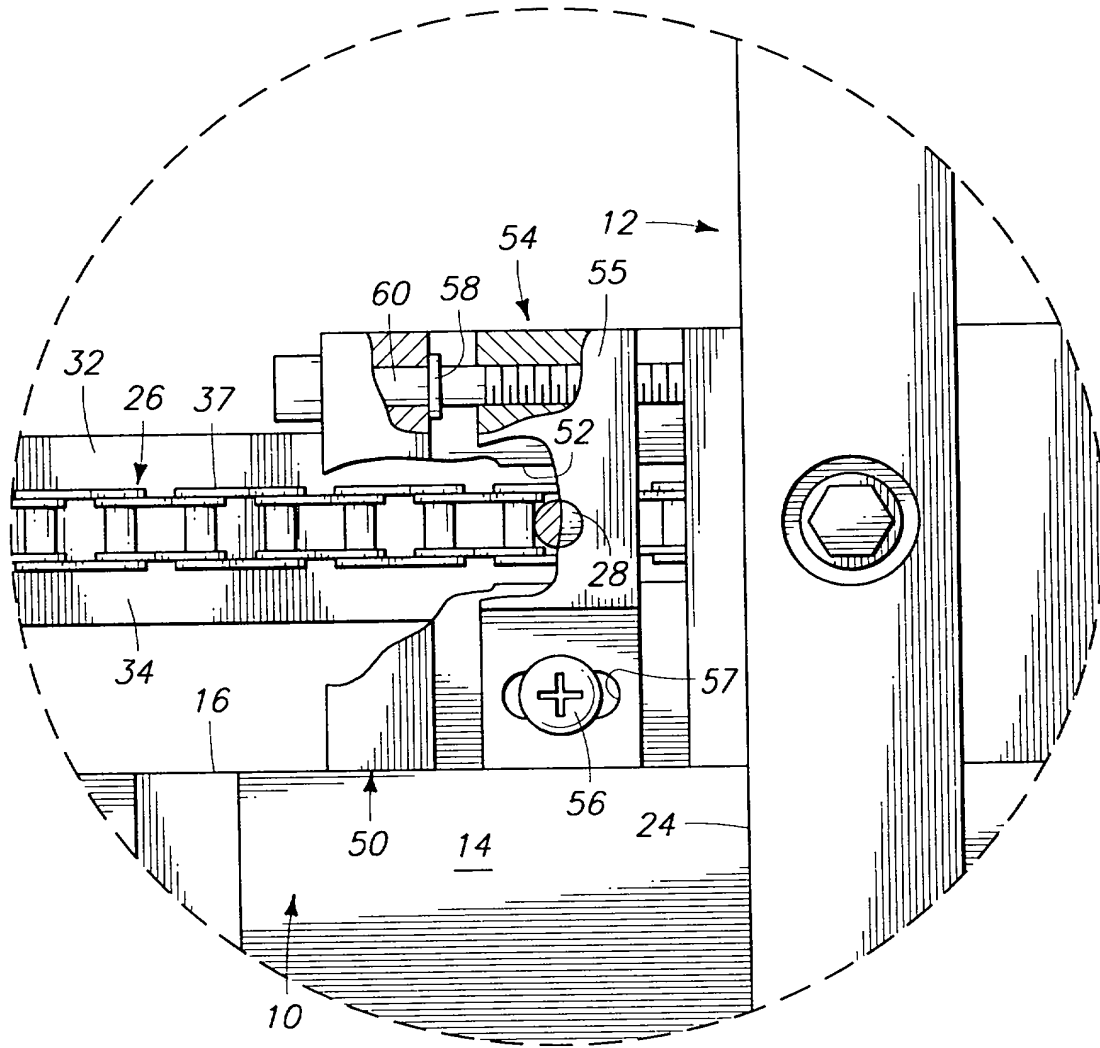




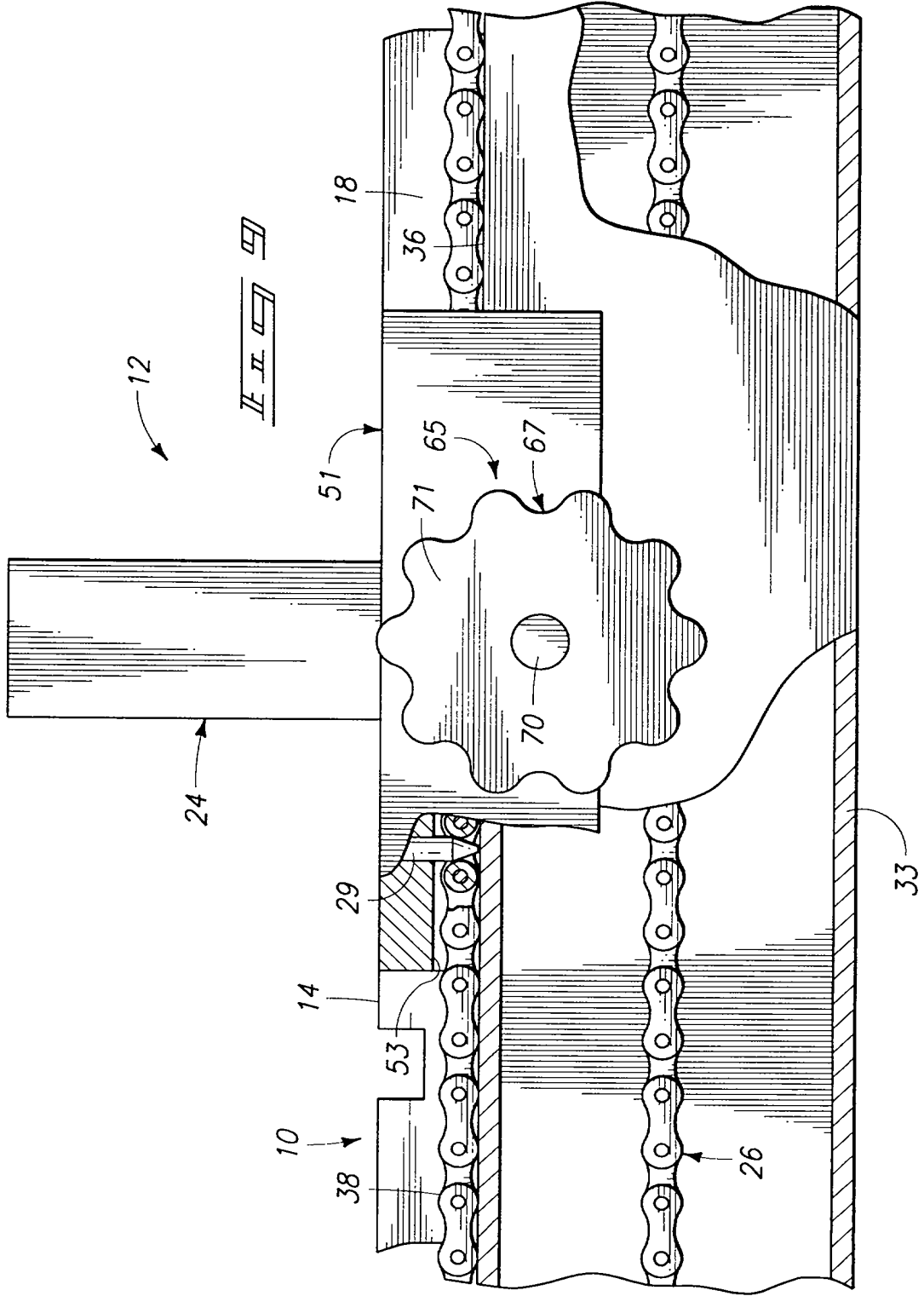
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor John P. Kennelly et al.
 Attorney's Docket No. KE27-001
 Title: Cutting Table Fence

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
 (37 CFR 1.9(f) and 1.27(b)) - INDEPENDENT INVENTOR

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled Cutting Table Fence described in the specification filed herewith.

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ no such person, concern, or organization
☐ persons, concerns or organizations listed below

NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME:

ADDRESS:

☐ Individual ☐ Small Business Concern ☐ Nonprofit Organization

NAME:

ADDRESS:

☐ Individual ☐ Small Business Concern ☐ Nonprofit Organization

NAME:

ADDRESS:

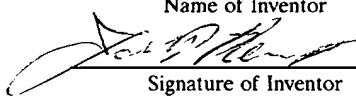
☐ Individual ☐ Small Business Concern ☐ Nonprofit Organization

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

John P. Kennelly

Name of Inventor



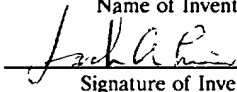
Signature of Inventor

6/5/98

Date

Jack A. Linn

Name of Inventor



Signature of Inventor

Date

Name of Inventor

Signature of Inventor

Date

DECLARATION OF JOINT INVENTORS FOR PATENT APPLICATION

As the below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: Cutting Table Fence, the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations §1.56.

PRIOR FOREIGN APPLICATIONS:

I hereby state that no applications for foreign patents or inventor's certificates have been filed prior to the date of execution of this declaration.

POWER OF ATTORNEY:

As a named Inventor, I hereby appoint the following attorneys and agent to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: Richard J. St. John, Reg. No. 19,363; David P. Roberts, Reg. No. 23,032; Randy A. Gregory, Reg. No. 30,386; Mark S. Matkin, Reg. No. 32,268; James L. Price, Reg. No. 27,376; Deepak Malhotra, Reg. No. 33,560; Mark W. Hendricksen,

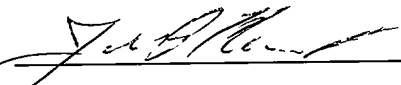
1 Reg. No. 32,356; David G. Latwesen, Reg. No. 38,533; George G.
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9 I hereby declare that all statements made herein of my own
10 knowledge are true and that all statements made on information and
11 belief are believed to be true; and further that these statements were
12 made with the knowledge that willful false statements and the like so
13 made are punishable by fine or imprisonment, or both, under
14 Section 1001 of Title 18 of the United States Code and that such willful
15 false statement may jeopardize the validity of the application or any
16 patent issued therefrom.

17 * * * * *

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19 Inventor's Signature: 

20 Date: 6/25/98

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